The examiner did not make any substantive rejections with respect to claims 8, 9, 20, and 21. Therefore, with the exception of the provisional double-patenting rejection with respect to these claims, the applicants believe that the examiner will allow these claims.

Applicant believes that the pending claims are not anticipated by, nor obvious over the cited references and respectfully traverses the examiner's rejections for the reasons that will be set forth below.

Re the Claims:

Claims 2 and 14 have been cancelled.

Claim 1 has been amended to more clearly provide antecedent basis for "the first and second ends". In addition, claim 1 has been amended to include the limitations of original claim 2 and that the guide member be "integral with" the first elongate gear rack.

Claim 3, which originally depended from claim 2, has been amended to depend from claim 1.

Claim 8 has been amended to independent form. Claim 8 formerly depended from original claim 1. Therefore, each of the limitations of original independent claim 1 has been incorporated into amended claim 8.

Claim 11 has been amended to include the limitation of original claim 14 and that the guide member be "integral with" the gear rack.

Claim 15, which originally depended from claim 14, has been amended to depend from claim 11.

Claim 23 has been amended to include the limitation that the guide means is "integral with" the elongate gear rack.

Legal Standard For Rejecting Claims Under 35 U.S.C. § 102

The standard for lack of novelty, that is, for "anticipation," under 35 U.S.C. §102 is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986). Invalidity for anticipation requires that all of the elements and limitations of the claims be found within a single prior art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991). Every element of the claimed invention must be literally present, arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (finding that the jury had been erroneously instructed that anticipation may be shown by equivalents, a legal theory that is pertinent to obviousness under Section 103, not to anticipation under Section 102). "The identical invention must be shown in as complete detail as is contained in the patent claim." MPEP, Volume 2, §2131 (7th Ed. 1998) (citing *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). Furthermore, functional language, preambles, and language in "whereby," "thereby," and "adapted to" clauses cannot be disregarded. *Pac-Tec, Inc. v. Amerace Corp.*, 14 USPQ2d 1871 (Fed. Cir. 1990).

"It is by now well settled that the burden of establishing a *prima facie* case of anticipation resides with the Patent and Trademark Office." *Ex parte Skinner*, 2 USPQ2d 1788, 1788-1789 (Bd. Pat. Int. 1986) (holding that examiner failed to establish *prima facie* case of anticipation). The examiner has "the burden of proof . . . to produce the factual basis for its rejection of an application under sections 102 or 103." *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) (quoting *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967)). Only if that burden is met, does the burden of going forward shift to the applicant.

Discussion of the Reference

Tadokoro, et al., U.S. Patent No. 6,166,877 (Tadokoro): The Tadokoro reference discloses a cassette auto changer system including, among other things, a selection member for selecting between a plurality of cassettes. In particular, with respect to the embodiment shown in FIG. 19, FIG. 20, and FIG. 21, Tadokoro discloses a cassette transfer mechanism 2 with upper and lower horizontally arranged rack members 32, 32 disposed so as to engage the upper and lower guide rails 8, 8 disposed on each of the consoles A-D. A vertical pillar 30 is supported between the upper and lower rack members 32 so as to be movable in a horizontal plane. Upper and lower end portions 30a, 30b attached to each end of the pillar 30 include a plurality of guide rollers 33 for pressingly engaging the guide rails 8 at three sides thereof to provide stable support and rolling movement for the cassette transport mechanism 2. A pulley 35 mounted on the drive shaft of the motor 34 engages a timing belt which further engages

a drive pulley 37 on rotatable shaft 38. Drive gears 29, 29 are engaged with adjacent reduction gears 40, 40 at each side thereof. Smaller pinion gears are coaxially disposed at upper sides of the upper reduction gears 40, 40 and lower sides of the lower reduction gears 40, 40 to engage horizontal rack gear teeth formed on the upper and lower rack members 32, 32.

Argument

Claims 1-7, 10-19, and 22-23 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,166,877 to Tadokoro, et al. (hereinafter, "Tadokoro") for the reasons set forth in the Office Action. However, none of the prior art references disclose or make obvious a modular data storage system that meets each of the limitations of each of the currently pending claims. Consequently, each of the currently pending claims is allowable over the prior art of record.

Claim 1 has been amended to include the limitations of original claim 2 and that the guide member be integral with the gear rack. That is, claim 1 now includes the limitations of "a first elongate guide member integral with said first elongate gear rack and extending along the displacement path substantially between the first and second ends of said first elongate gear rack" and "a first bearing mounted to the cartridge access device, said first bearing engaging said first elongate guide member". As discussed in more detail below, these limitations are not disclosed in, nor obvious in view of, Tadokoro.

The examiner asserts that the limitations of a guide member and bearing, as presented in original claim 2, are anticipated by Tadokoro. Specifically with reference to FIG. 20 and FIG. 21,

Tadokoro shows rack members 32 engaging upper and lower guide rails 8, and a plurality of guide rollers 33 pressingly engaging the guide rails 8 (see specification Col. 14, lines 9-20). However, Tadokoro does not disclose an integral guide member and gear rack. Instead, the guide rails 8 disclosed in Tadokoro are separately connected to the rack members 32. This design increases the likelihood that the gears 41 and the rack members 32 are misaligned during assembly. Such misalignment may result in binding, slipping, and/or uneven wear of the gears 41 and the rack members 32.

The applicants' invention, on the other hand, requires that the guide member (e.g., portion 50) and the gear rack (e.g., 20) be integral with one another, as shown in FIG. 1, FIG. 2, and FIG. 3. For example, "in one preferred embodiment, both the lower and upper gear racks 20 and 22 are fabricated from sheet metal with the respective guide member portions 50 and 52 thereof comprising up-turned and down-turned edge portions, respectively" (see specification page 13, line 26 to page 14, line 2). As such, the integral guide member and gear rack of the applicants' invention eliminates an assembly step that would otherwise require precision to ensure that the guide rail is assembled to the gear rack within required tolerances to avoid misalignment of one with the other.

For the above reasons, the applicants believe that independent claim 1, as amended, is not anticipated by, nor obvious in view of, Tadokoro. The examiner also asserts § 102(e) rejections against dependent claims 2-7, and 10. Dependent claim 2 has been cancelled. In addition, as independent claim 1 is not anticipated by, nor obvious in view of, Tadokoro, it follows that the remaining dependent claims 3-7, and 10 are also not

anticipated by, nor obvious in view of, Tadokoro. As such, although the remaining dependent claims 3-7, and 10 are also believed to be allowable on their own grounds, these claims will not be discussed in further detail herein.

Claim 11 has been amended to include the limitations of original claim 14 and that the guide member be integral with the gear rack. That is, claim 11 now includes the limitation of "a first elongate guide member integral with said first elongate gear rack . . ." and "a first bearing mounted to the cartridge access device . . .". Again, and as explained above with respect to claim 1, the integral guide member and gear rack of the applicants' invention are not disclosed by, nor made obvious by, the cited prior art.

For the above reasons, the applicants believe that independent claim 11 is patentable over Tadokoro. The examiner also asserts § 102(e) rejections against dependent claims 12-19, and 22. Claim 14 has been cancelled. In addition, as independent claim 11 is not anticipated by, nor obvious in view of, Tadokoro, it follows that the dependent claims 12-13, and 15-19, and 22 are also not anticipated by, nor obvious in view of, Tadokoro. As such, although dependent claims 12-13, and 15-19, and 22 are also believed to be allowable on their own grounds, these claims will not be discussed in further detail herein.

Claim 23 has been amended to include the limitation of "guide means integral with said elongate gear rack". As explained above with respect to claim 1, the integral guide means of the applicants' invention is not disclosed by, nor made obvious by, the cited prior art.

Provisional Rejection of Claims 1-23 under Obviousness-Type Double Patenting:

The examiner provisionally rejected claims 1-23 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of commonly owned pending U.S. Patent Application Serial No. 09/337,802. The applicants will submit a terminal disclaimer upon the examiner indicating that the claims are otherwise allowable.

CONCLUSION

Applicant believes that all of the claims currently pending in this patent application, as amended and as discussed above, are allowable and that all other problems raised by the examiner have been rectified. Therefore, applicant respectfully requests the examiner to reconsider his rejections and to grant an early allowance. If any questions or issues remain to be resolved, the examiner is requested to contact the applicant's attorney at the telephone number below.

Respectfully Submitted,

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HP 10980297-1

APPENDIX

CHANGES MADE TO CLAIMS

Claims 2 and 14 have been cancelled.

Claim 1 has been amended as follows:

1. (Amended) A modular data storage system for handling and storing data cartridges, comprising:

a) a cartridge access device;

b) at least two laterally adjacent modular units, each of said modular units comprising:

i) a plurality of cartridge receiving devices;

ii) a first elongate gear rack <u>having first and second ends and</u> aligned along a displacement path;

<u>iii) a first elongate guide member integral with said first elongate gear rack and extending along the displacement path substantially between the first and second ends of said first elongate gear rack;</u>

<u>iv) a first bearing mounted to the cartridge access device, said first bearing engaging said first elongate guide member;</u>

[iii] <u>v)</u> a second elongate gear rack aligned along said displacement path and positioned in spaced-apart relation to said first elongate gear rack; and

[iv] vi) wherein the first elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the second elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units;

c) a translation apparatus for moving a cartridge access device along a displacement path, comprising:

i) a first drive pinion mounted to the cartridge access device, said first drive pinion engaging said first elongate gear rack;

ii) a second drive pinion mounted to the cartridge access device, said second drive pinion engaging said second elongate gear rack; and

iii) a pinion drive apparatus operatively associated with said first and second drive pinions, said pinion drive apparatus rotating said first and second drive pinions to move the cartridge access device among the first and second elongate gear racks of said laterally adjacent modular units.

Claim 3 has been amended as follows:

3. (Amended) The modular data storage system of claim [2] 1, wherein said first elongate guide member comprises first and second opposed bearing surfaces and wherein said first bearing mounted to the cartridge access device slidably engages the first

and second opposed bearing surfaces of said first elongate guide member.

Claim 8 has been amended as follows:

8. (Amended) [The modular data storage system of claim 1, each of said modular units further comprising:] A modular data storage system for handling and storing data cartridges, comprising:

a) a cartridge access device;

b) at least two laterally adjacent modular units, each of said modular units comprising:

i) a plurality of cartridge receiving devices;

ii) a first elongate gear rack aligned along a displacement path;

iii) a second elongate gear rack aligned along said displacement path and positioned in spaced-apart relation to said first elongate gear rack;

iv) wherein the first elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the second elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units;

[a)] v) a third elongate gear rack positioned in generally parallel, spaced-apart relation to said first elongate gear rack;

[b)] vi) a fourth elongate gear rack positioned

in generally parallel, spaced-apart relation to said second elongate gear rack so that said first, second, third, and fourth elongate gear racks define a generally rectangular, parallelopiped configuration with said first and third elongate gear racks defining a bottom side of the generally rectangular, parallelopiped configuration and said second and fourth elongate gear racks defining a top side of the generally rectangular, parallelopiped configuration; and

[c)] vii) wherein the third elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the fourth elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units[.];

c) a translation apparatus for moving a cartridge access device along a displacement path, comprising:

i) a first drive pinion mounted to the cartridge access device, said first drive pinion engaging said first elongate gear rack;

ii) a second drive pinion mounted to the cartridge access device, said second drive pinion engaging said second elongate gear rack; and

iii) a pinion drive apparatus operatively associated with said first and second drive pinions, said pinion drive apparatus rotating said first and second drive pinions to move the

cartridge access device among the first and second elongate gear racks of said laterally adjacent modular units.

Claim 11 has been amended as follows:

11. (Amended) A modular data storage system for handling and storing data cartridges, comprising:

a) a cartridge access device;

b) a master modular unit and at least one slave modular unit, each of said modular units being positioned adjacent one another to form laterally adjacent modular units, each of said modular units comprising:

i) a plurality of cartridge receiving devices;

ii) a first elongate gear rack having first and second ends and aligned along a displacement path;

iii) a first elongate guide member integral with said first elongate gear rack and extending along the displacement path substantially between the first and second ends of said first elongate gear rack;

iv) a first bearing mounted to the cartridge access device, said first bearing engaging said first elongate guide member;

[iii] v) a second elongate gear rack aligned along said displacement path and positioned in spaced-apart relation to said first elongate gear rack; and

[iv] vi) wherein the first elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, and the second elongate gear racks of said laterally adjacent modular units are substantially in alignment with one another, such that said cartridge access device may be translated among said laterally adjacent modular units;

c) a translation apparatus for moving a cartridge access device along a displacement path, comprising:

i) a first drive pinion mounted to the cartridge access device, said first drive pinion engaging said first elongate gear rack;

ii) a second drive pinion mounted to the cartridge access device, said second drive pinion engaging said second elongate gear rack; and

iii) a pinion drive apparatus operatively associated with said first and second drive pinions, said pinion drive apparatus rotating said first and second drive pinions to move the cartridge access device among the first and second elongate gear racks of said laterally adjacent modular units;

d) said master modular unit further comprising a power supply.

Claim 15 has been amended as follows:

15. (Amended) The modular data storage system of claim [14] 11, wherein said first elongate guide member comprises

first and second opposed bearing surfaces and wherein said first bearing mounted to the cartridge access device slidably engages the first and second opposed bearing surfaces of said first elongate guide member

Claim 23 has been amended as follows:

23. (Amended) A modular data storage system for handling and storing data cartridges, comprising:

a) a cartridge access device;

b) at least two laterally adjacent modular units, each of said modular units comprising:

i) a plurality of cartridge receiving devices; and

iii) an elongate gear rack aligned along a displacement path;

c) a translation apparatus for moving a cartridge access device along a displacement path, comprising:

i) guide means [mounted to] integral with said elongate gear rack for guiding the cartridge access device along said displacement path;

ii) a drive pinion mounted to the cartridge access device, said drive pinion engaging said elongate gear rack; and

iii) pinion drive means operatively associated with said drive pinion for rotating said first drive pinion to move the cartridge access device along the displacement path;

d) wherein said elongate gear racks of said laterally adjacent modular units are substantially in

alignment with one another such that said cartridge access device may be translated among said laterally adjacent modular units.